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THERMAL COMPENSATION FOR HEAD PROTRUSION IN A MAGNETIC DRIVE

ABSTRACT OF THE DISCLOSURE

A head for a magnetic drive that includes a substrate with a thermal expansion rate CTE1. A transducer in the head has a bond to the substrate and has a transducer thermal expansion rate CTE2 that is greater than CTE1. A restraint layer in the substrate has a bond to one side of the transducer and has a first restraint layer thermal expansion rate CTE3 that is lower than CTE1. The restraint layer restrains protrusion of the transducer beyond the substrate at higher operating temperatures.